

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Rural Health Care)	WC Docket No. 02-60
Support Mechanism)	
)	

To the Commission:

**COMMENTS OF

INSTITUTE FOR INTERNATIONAL EMERGENCY
MEDICINE AND HEALTH
BRIGHAM AND WOMEN’S HOSPITAL**

The Institute for International Emergency Medicine and Health (“IEMH”) in the Department of Emergency Medicine at the Brigham and Women’s Hospital in Boston, Massachusetts is submitting these Comments in response to the Federal Communications Commission’s *Further Notice of Proposed Rulemaking* released by the Federal Communications Commission (“FCC” or “Commission”) on November 17, 2003, in WC Docket No. 02-60.

Statement of Interest

Since its inception, IEMH has worked to develop a model for the expansion of

high quality emergency medical services to underserved areas. Currently, IEMH is developing a partnership with Native American tribes to bring the advantages of expert emergency care to health clinics on reservations and to build the human capacity necessary to respond to medical emergencies. In pursuing these efforts, IEMH will be relying on telemedicine technologies to provide real-time consultation, training, and support to the health workers on the reservation.

Discussion

IEMH plans to adapt its proven methodology for increasing emergency care capacity starting with a leadership forum to identify the health concerns of greatest need and build support within the rural community for new approaches to emergency care. Then, with the community support in place and key problems identified, IEMH begins a cost-effective train-the-trainers program to pass along essential emergency medicine knowledge and to share some of the training tools that will allow the trainers to share the same information with their local colleagues.

In the projects under development, IEMH plans to implement a continuous quality improvement aspect to its efforts that will include real-time telemedicine consultations. This plan is for the real-time exchange of essential medical information including digital x-ray images, digital ultrasound images, lab test results, and other relevant health information that will allow for direct consultation to deliver quality care when it is needed. The project will include two-way videoconferencing to allow the doctors in Boston to see patients receiving care at the remote, rural sites.

IEMH has been asked to help develop this project because the current system is severely strained due to lack of expert care in rural environments. Today, a patient whose condition requires emergency expert intervention is often transported by helicopter to a major trauma center. These helicopter transports are costly, time consuming, and dangerous especially in bad weather. IEMH, through its work internationally, has developed a methodology that equips the local health worker with the skills and access to information he or she needs to perform essential medical procedures without transporting the patient. Thus, the patients are treated closer to home, they receive better quality of care, the care delivered comes more quickly – which can be critical in emergency care – and they are able to have their families close at hand which can speed recovery. Using telemedicine will save lives and money.

As part of this project, IEMH expects to provide support to emergency workers who are transporting patients to the rural health clinic where the major telemedicine facilities are established. Some of the telemedicine support will be for those who are mobile, and some will be from the fixed clinic to the Brigham and Women's Hospital. The amount of data transmitted from the fixed clinic to the Brigham and Women's Hospital will be great, as medical images are very detailed. While one image from a CT scan may be only one megabyte of data, the complete examination may contain 100 images, all of which will need to be transmitted in time for the emergency physicians in Boston to provide expert interpretations of the information and then offer assistance in addressing the health needs of the patient.

Some of the rural clinics will be linked to high speed telemedicine networks

already. Other clinics may need to install broadband telecommunications links that will provide the necessary connectivity to enable full telemedicine support for emergency health care. IEMH wishes to suggest that the FCC write its regulations to allow the maximum amount of support for telecommunications linkages between rural America and health centers of excellence. As its current project is under development, it is too soon to know what sort of telecommunications links will be appropriate from the various health centers to the hospital in Boston. Some of the rural partners are expected to be in remote desert areas, some will be in the mountains, some may be in harsh climates such as northern Montana. The selection of telecommunications services is likely to be made based upon the availability of services, the utility of the services, and the cost of the services. With so few choices in many rural areas, IEMH hopes the Commission writes regulations that will maximize those choices.

To the extent that the project expands to provide some immediate telemedicine support to ambulances that are bringing patients to the clinic, after a heart attack, stroke, or accident, the services necessary will have to be available on a mobile basis. The ambulance might need to transmit voice communications, perhaps e-mail, share information from heart monitors, or even access the Internet to view just-in-time information on an essential procedure needed during transport. Diabetes, a growing health concern across all of the United States, has hit the Native American community especially hard. This has led to a large number of other health concerns especially strokes, heart attacks, and failing vision. Accident victims require that much greater care because of the pre-existing health conditions. The sooner that the experts can be consulted in time of emergency, the more lives can be saved.

In Boston, health facilities have many choices in selecting telecommunications services, and it makes those choices on the effectiveness of the service and the lowest price. IEMH urges the Commission to write regulations that allow rural healthcare providers to select effective telecommunications services, including satellite services when necessary. IEMH believes that this approach will help drive up the demand for telecommunications services in these remote and rural areas, and the increased demand will cause the development of information infrastructure.

A cap on the amount of money available to support certain telemedicine applications will have a chilling effect on the development of innovative telemedicine projects. Therefore IEMH discourages the FCC from imposing any cap on support for rural telemedicine. Instead, IEMH urges the Commission to write regulations that preserve flexibility, encourage innovation, and allow for the creation of hybrid telecommunications solutions. These qualities are likely to drive innovation farther faster. With more rural telemedicine, it will be possible to create networks that may be able to share some facilities. This approach will bring down the costs of subsequent projects, allowing for economies of scale. Any arbitrary cap on costs at the outset may preclude later benefits and could prolong the health disparities faced by rural America.

Conclusion

For the reasons stated above, IEMH urges the Commission to write regulations that preserve flexibility for telemedicine providers in choosing the services necessary to deliver high quality care. Further, IEMH urges the FCC to avoid putting a cap on the

amount of support available for satellite services which otherwise might have a chilling effect on innovation.

Respectfully Submitted,

Mark A. Davis, MD, MS
Director, IEMH
Brigham and Women's Hospital
Neville House
75 Francis St.
Boston, MA 02115

Ron M. Walls, MD
Chairman
Department of Emergency Medicine
Brigham and Women's Hospital
Neville House
75 Francis St.
Boston, MA 02115